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ABSTRACT

Brief reports are given of research projects worked on by staff members of the Scottish Council for Research in Education during 1983-84. Major projects included: (1) teaching strategies in the primary school; (2) second international (IEA) mathematics survey; (3) evaluation of the Craigroyston curriculum project; (4) further education for the handicapped; (5) evaluation of links between primary schools and non-formal education agencies; (6) further education colleges and changing student needs; (7) writing across the curriculum, stage 2: teaching writing for learning; (8) assessment of mathematics 1983; (9) Scottish restandardisation of the Wechsler Intelligence Scale for Children--Revised (WISC-R); (10) education for the community; (11) evaluation of the Lothian Region ergonomics project; (12) induction, assessment and guidance in the Youth Training Scheme; (13) schools' assessment research and support unit; (14) guidance and choice in the 16-18 action plan; and (15) educational opportunities for young people with special education needs. Other information provided in this report includes the council's finances, communications, and research; council awards; conference papers; staff publications; council accounts; and educational researchers. (JD)

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THE SCOTTISH COUNCIL FOR RESEARCH IN EDUCATION

FIFTY-SIXTH ANNUAL REPORT 1983-84

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THE SCOTTISH COUNCIL FOR RESEARCH IN EDUCATION

FIFTY-SIXTH ANNUAL REPORT
1983-84

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J G Morris, HMCI, New St Andrew's House, Edinburgh (*until 31.10.83*)
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THE SCOTTISH COUNCIL FOR RESEARCH IN EDUCATION

Fifty-sixth Annual Report 1983-84

COUNCIL (Chairman — Mr Hugh Fairlie)

Chairman's Report

My colleagues Mrs Cameron-Jones (Research), Mr Hume (Finance) and Mr Magowan (Communications), in reporting the work of their committees, have covered the activities of the Council in the three on-going areas during 1983-84. It is for me to draw attention to some of the other events and issues which have concerned the Council during this period.

I am sure that all will welcome the decision that the Fellowship award, made triennially by the Council, will have as its recipient in 1984, Professor John Nisbet of the University of Aberdeen. Professor Nisbet has been prominent for many years in educational research, and was a member of the Council of SCRE from 1960 until 1978 and chairman from 1975-78. His is the third award, the other two recipients being Professor Philip Vernon and Dr David A Walker.

The year saw the retirement of Mr J G Morris, HMCI, who had been one of the assessors to the Council since 1966. His has been perhaps the major influence on educational research in Scotland in recent years and to the Council he has been consistently guide, adviser and friend. To mark the contribution he has made to research in general and to the Council in particular, a number of those prominent in the educational scene in Scotland were invited to contribute articles on research for a "festschrift" which was dedicated to him and published under the title *An Attitude of Mind*.

Finance continues to be an ever present worry and it is to be hoped that next year will see some recovery, and with it more possibility of initiating a greater programme of "in-house" research. While the Rothschild model of negotiated research, which, perforce, the Council has to adopt,

is very suitable for work undertaken by the individual researcher in University or Colleges of Education, it is open to question as to whether it is the most efficient "modus operandi" for a full-time research organisation. It is extremely difficult for the Council to determine at its own hand what research should be undertaken by its staff, and virtually impossible to embark upon any significant forward planning — an examination of the consequences of Rothschild, now that 12 years of experience have been gained, might well be one of the tasks of the reconstituted Council.

It is important that from time to time any organisation such as SCRE should undertake a review of its activities and sometimes this is better carried out by someone who is not himself involved in the machinery, for, while it is not always true that the onlooker sees most of the game nor that he will discover flaws not already known to the participants, at the same time the approach from the outside has a neutrality which makes its findings perhaps the more acceptable.

This is why the Council welcomed the "Pliatzky" type review undertaken by Mr I C Freeman, which has now been completed. It is reassuring to know that Mr Freeman concludes not only that the function which is being carried out by SCRE is a valuable one, but also that that function is better to be carried out by the Council than by any other means; and that much would be lost if the Council were to cease to exist.

In its more critical aspects also, the Report is generally helpful in pointing out what, in Mr Freeman's opinion, are ways by which the work of the Council could be carried out better and more economically, and even allowing for the fact that matters always seem much simpler to the theorist than to the practitioner, there are many thoughtful proposals in the Report which merit the serious attention of the Council in 1984-85. In its analysis of the organisation of the Council and its work this Report offers an opportunity for reconstruction which, it is to be hoped, the Council will grasp positively and as a result will make an even more significant contribution to educational research in the future than the considerable one which it has made in the past.

There will be a major change in the composition of the Council when it is reconstituted in June 1984, no fewer than 10 members retiring at that date. The thanks of the Council are due to them all for their contribution to its work during their term of office. The Council would wish me once more to acknowledge the support provided by the Scottish Education Department through the very considerable grant made to cover costs and overheads, the funding provided for several of our projects, and the invaluable assistance and advice proferred by the officers and HMIs who act as assessors on the Council.

Finally, as always, to the Director and the Staff of the Council we extend our appreciation of what has again been in some ways a difficult year, but again one of considerable achievement. Vale!

REPORTS OF CHAIRMEN OF COMMITTEES

Finance & General Purposes Committee (Chairman: Mr J Hume)

Despite the continuing endeavours throughout the year to restrict expenditure, there was a deficit of £6,922, which was deducted from the General Fund. The basic grants from the Scottish Education Department and Scottish Regional Educational Authorities increased marginally but the economies made were not enough to contain the increase in costs in line with the increase in income. This imbalance must not continue and the funding requirements in the ensuing year of 1984-85 are receiving the close scrutiny of the committee. A saving in salary is being achieved by the early retirement of one of the technical staff and one of the clerical staff, with only one post being filled.

Specially funded projects continue to be difficult to find and, with some projects coming to an end, it is with regret that I record that contracts of two members of the research staff terminated at 31st March 1984 and another contract will be terminated at 30th June 1984.

The audited accounts are on pages 35 to 40 and supplementary information is:

No remuneration is paid by the Council to its officers or members but travelling expenses were reimbursed to the extent of £2,766. Corresponding amounts for employees were:

Officials	£4,540
Internal Programme	£2,413
Externally Funded Projects	£9,410

Communications Committee (Chairman: Mr S Magowan)

The most important single change in the course of the year was the Council's discontinuing as from 1st January 1984, the arrangement whereby many of its publications were distributed by Hodder & Stoughton. For some years the Council had been the publisher and distributor for those of its publications thought to have a significant market in Scotland only; it had moreover supplied by mail order an increasing proportion of all its publications. Since the preparation and printing of all publications had for the last 10 years been managed entirely by the Council's staff, becoming its own distributor for all publications may be seen as a logical development, though the change of course has made increased demands on staff time both in respect of preparation and distribution of publicity materials and in supplying booksellers as well as mail-order customers.

An early development of the Council's operating as its own publisher has been the making of an agreement with the Humanities Press Inc, whereby it will market SCRE books in the USA and Canada. In addition, print-room equipment has been diversified to permit the

complete production of booklets in-house. This, it is hoped, will result in cheaper production of such shorter works, especially when relatively small editions are involved. The word-processing equipment installed in mid-1983 is providing photoready copy for internal lithographic printing and, as an alternative, permitting the transmission of text in magnetic form for photosetting externally.

The new capacity to produce booklets in-house relates well to a developing policy of producing more short reports that teachers will find both easy to read and cheap to buy. They will not replace the publication of books since there remains a need both to report the evidence for research findings and to discuss the findings in greater detail than is possible in a booklet. The books no less than the booklets have teachers prominently amongst their target audience, and those teachers (and advisers) who read them are likely to act as important transmission agents, mediating the findings of research to their colleagues. Nonetheless, it is hoped that the booklets will reach a wider audience than the books and, at the same time, by awakening interest, encourage more to spend the time necessary to study and ponder over the longer texts.

This attempted expansion of dissemination through the written word is taking place at a time of great financial stringency when it is necessary for the Council's publishing activities to be self-financing. (It is, unfortunately, no longer possible to subsidise publications as has, when necessary, hitherto been done to permit the publication of works that, because they are of specialist interest, are unlikely to achieve sufficient sales to be commercially viable. The continued search for means of minimising production costs is particularly important if such works are still to be made freely available. No less important in achieving this is the maximising of sales.

Publications issued in 1983 and so far in 1984 are listed on p 55 and are also referenced, where appropriate, in the reports of the projects from which they arise.

Communication is, of course, not restricted to the written word, and conferences, seminars, and in-service courses conducted in collaboration with local authorities permit a more active role for those attending. Most prominent amongst those provided in the year under review were the in-service seminars conducted in September 1983, in both Glasgow and Edinburgh, by Professor James Popham of UCLA. His lively presentation on the subject of criterion-referenced testing was supplemented by "work-shop" groups, each led by a researcher conversant with the field. Other guest speakers have included Professor Inger Marklund (Research Policy in Sweden) and Professor Lilian Katz (Research on Pre-school Education). A number of conferences/seminars are projected to be held in 1984-85 in a range of localities.

Since oral communication, however extensive, can reach only a very small part of SCRE's constituency, the lynch pin of the Council's

communication effort remains its twice-yearly newsletter, "Research in Education". It is hoped that the presentational changes and the new three-column format adopted in the first issue for 1984 will meet with the approval of readers.

Research Committee (Chairman: Mrs M Cameron-Jones)

I am very happy to be writing this, my first, report as the Chairman of the Council's Research Committee. The research work which has been done by the Council staff in the past year is described by the researchers themselves on pages 16 to 27 of this booklet. From these descriptions of the various individual projects it can be seen that the range of work being done continues to be wide, although on balance it is weighted at the moment towards education in Secondary Schools/FE rather than Preschool/Primary or Higher Education. The growth points for new research activity by the Council, it can be seen, have included some of those which one would be looking for from a body seeking to serve the education system at the present time. These have included the important initiatives related to the school-based assessment of pupils (funded by COSLA and SED, see page 23), to the Government's 16-18 Action Plan (for example the project described on page 24 which is jointly funded by SCOTBEC and SED) and to educational opportunities for young people with Special Educational Needs (see page 25 for a new project in this area, funded by SED).

The point of our own committee work has been to keep under review the balance of the Council's research activity as it has developed over the year and to try to foresee and to foster growth points. In a time of rapid change the questions which arise for us from both of these aims are complex and important. Should the span of the research work done be widened so as to inform a greater range of development? How should its balance shift to anticipate new directions in curriculum, pedagogy and resources across the system, and to reflect growth in specific areas such as primary education? How best should the work recognise the need for educational research to speak clearly not only to educational practitioners but also to parents, the community, industry and employers? Where should the funding come from? Crucially, how should we strengthen research links with teachers and administrators and how should we support practitioner involvement in collaborative and action research?

With such criteria guiding our agendas we have had a challenging role for any committee this last year. At our second meeting we began to review that role and we have since developed our thinking about it during the wider debate which is described by the Council's Chaiman on page 9. We very much welcomed this debate, believing that research should be good value for the society and for the specific funders which support

it and believing also that good research is essential, not optional, to the pursuit of educational quality.

For all of us who feel that way and who are responsible for serving the education system well in a time of rapid change, our concern accordingly must be not whether but how we should improve our capacity to facilitate good research in Scotland.

SUMMARY REPORT OF SCRE PROJECTS

Title of Project	*Principal Researcher(s)*	*Starting Date*	*Approximate Duration*	*Source of Finance*	*Report Page*
Teaching Strategies in the Primary School	J L Powell	1973	11 yrs	SCRE	16
Second International (IEA) Mathematics Survey	W G Thorpe	1978	6 yrs	SCRE	17
Evaluation of the Craigroyston Curriculum Project	A Peacock	1980	3 yrs	Van Leer	17
Further Education for the Handicapped	M Corrie	1981	3 yrs 3 mths	SED	18
Evaluation of Links between Primary Schools and Non-Formal Education Agencies	J Raven	1981	2 yrs	SED	19
Further Education Colleges and Changing Student Needs	A C Ryrie	1981	2 yrs 2 mths	SED	19
Writing Across the Curriculum, Stage 2: Teaching Writing for Learning	E Spencer	1981	3 yrs	SED	20
Assessment of Mathematics 1983	G J Pollock B Duncan	1982	2 yrs 6 mths	SED	21
The Scottish Restandardisation of the WISC-R	W G Thorpe	1982	3 yrs	SCRE	21
Education for the Community	A Peacock	1982	1 yr 4 mths	Van Leer	22
Evaluation of the Lothian Region Ergonomics Project	M Corrie	1983	2 yrs 6 mths	Lothian	23
Induction, Assessment and Guidance in the YTS	A C Ryrie	1983	1 yr	SED	23
Pakistan Primary Education Project Consultancies	A C Ryrie			British Council & World Bank	23
Schools' Assessment Research and Support Unit	H D Black	1983	3 yrs	COSLA/SCRE/SED	23
Guidance and Choice in the 16-18 Action Plan	A C Ryrie	1984	3 yrs 9 mths	SCOTBEC/SED	24
Educational Opportunities for Young People with Special Educational Needs (EDSPEN)	M Corrie	1984	2 yrs 2 mths	SED	25
Editorial Work on Modules	M Hutchings	1984	3 mths	SED	26
Scottish Research into Maladjustment 1974-83	A Peacock	1984	3 mths	SED	26

REPORTS ON PROJECTS

Teaching Strategies in the Primary School

J L Powell (Principal Researcher and SRO)

This major project, which was completed at the end of 1983, was concerned primarily to secure greater understanding not of separate teaching skills — important as many of them may be — but of them combined and interacting. In so doing, this project moved in a direction contrary to that of much classroom based research in the last decade and, in order to follow this different course, had to construct many of its own instruments of assessment and find appropriate means of analysing the data so obtained.

A book relating to the project will shortly be published under the title, *The Teacher's Craft*. It describes the 17 clusters formed on the basis of the data obtained by observing 128 teachers and recording 43 aspects of their teaching style on the SCOTS schedule of the System for the Classroom Observation of Teaching Strategies (the SCOTS schedule), which was itself devised in the course of the project. The teachers in each cluster had many characteristics in common, but even within these relatively homogeneous clusters there were found interesting within-group differences.

One important conclusion is that earlier studies that have grouped teachers into very few clusters and then claimed them to represent meaningful teaching styles lack justification: with any system of recording that is sensitive to many aspects of teaching, such clusters can be demonstrated to have so great an internal diversity as to lack utility. It is indeed the case that even the 17 clusters produced using the SCOTS schedules have within them differences that may be important and it is for this reason that they have been used primarily as a means of highlighting issues that all teachers need to come to grips with. It is also of great importance that, although those who, on subjective grounds, might be deemed to be the most skilled of the teachers observed had sufficient in common to be concentrated in only seven or eight clusters, they nonetheless differed from one another in many important respects.

There would thus seem to be a considerable range of ways in which a teacher can excel as a teacher. This is not to say that all highly skilled teachers are equally good in respect of every valid criterion but that each has arrived at a particular balance of advantage — one related to his (or her) personality and to his (or her) personal assessment of what should be achieved given the particular class of children to be taught. To attempt to define any one style of teaching as the ideal is, in short, simplistic.

As well as *The Teacher's Craft*, there will be available a booklet, *Ways of Teaching*, that will summarise for teachers the main conclusions of the project. The implications for classroom practice will be emphasised.

Second International (IEA) Mathematics Survey
W G Thorpe (Principal Researcher), S Freshwater (SRO: G J Pollock)

The aims of this project, which started in 1978, include a systematic investigation of the relationships between performance in mathematics at secondary school and factors such as home background, characteristics of the school system and pupil motivation. Information was gathered through surveys of random samples of pupils and teachers in S2, S4 and S5/6 in 1981.

A meeting of National Research Co-ordinators from 16 countries was held in Stirling University in June 1984 at which details of international and national results were presented.

Three international reports will be available in 1985-86. The Scottish National reports are in process of preparation.

Evaluation of the Craigroyston Curriculum Project
A Peacock (Principal Researcher), J Crowther (SRO: A C Ryrie)

This recently completed project, commissioned by the Bernard van Leer Foundation, evaluated the evolution of Craigroyston High School into a community school. The aim was to provide policy-orientated feedback as support for those involved within both the school and the community, and at the same time to monitor the effectiveness of the "Participant Evaluation" model used, in this context. This model has been essentially qualitative, demanding the immersion of evaluators in project and community activity, and has used a wide variety of data gathering techniques to monitor the complex process of development and the networks of interaction involved.

As a means of focusing attention on key questions needing to be resolved, regular feedback has been provided in the form of discussion papers. Whilst the above strategy has generated considerable evidence and valuable insights, such a prolonged and close relationship with a single institution as both "insiders" and "outsiders" has created some difficulties in relationships. Moreover, the changing context in which community school development has had to take place has heightened the importance of seeing how national and regional policies on community development and community education have affected the process and direction of change.

The final report will shortly be completed. Earlier Annual Reports and discussion papers on the following subjects are available as photocopies from SCRE:

(1) Teachers' Attitudes and Involvement.
(2) Management Structure and Function as Perceived by Working Party Members.
(3) Cultural Activities and Community Development.

(4) The Appointment of an Adult Basic Education Worker.
(5) Collaboration in Community Events.
(6) What is a Community School?
(7) Lessons from the "Open Forum": A Study in Relations between Evaluators and Project Directorate.
(8) Potential Growth Points.

Further Education for the Handicapped
M Corrie (Principal Researcher), S Zaklukiewicz (SRO: W B Dockrell)

This SED-funded project, which formally ended in December 1983, was broadly concerned with developments in educational provision for mentally handicapped and physically handicapped young people. The focus of the work was on developments in schools, colleges of further education and adult training centres considered to be of particular interest and value to those working in this area of the educational service. The aim of the project was to provide a description of such developments which could serve as a useful and illuminative guide, by describing what was being attempted, by indicating problems and constraints and by suggesting modifications where appropriate.

The project comprised four linked studies, each dealing with a different aspect but connected in having a bearing on the common theme of efforts to meet the educational needs of handicapped young people. The first was focused on leavers' programmes specifically developed in a variety of special schools. The second looked at the provision of special and modified courses for handicapped students in a number of colleges of further education. The third was directed towards efforts on a range of adult training centres to develop a substantial educational component as part of their overall provision. The fourth study followed the progress of a group of special school leavers to identify their pattern of post-school education and employment.

A range of material for dissemination to a variety of audiences has been produced during 1983-84. These have included two project working papers, describing respectively the detailed case studies carried out in four adult training centres and in four colleges of further education. This work involved the co-operation of social work and education departments in several regions for which the project team are most grateful. A third working paper reported on the second stage of the study of special school leavers, describing their destinations after leaving school and providing detailed case studies of the transition of individual leavers. These working papers were generally distributed to the regions and institutions taking part in the project. Papers were also produced for the SERA conference and for the international workshop on new approaches to research in special education funded by the Economic and Social Research Council and held in London in March this year. Articles based on these papers appear in recent and forthcoming publications.

Project Working Papers

(1) Corrie, M (1983). Leaving Special School — report on the first stage of a study of special school leavers.
(2) Zaklukiewicz, S (1984). Developments in Day Care, case studies of day care provision for mentally handicapped adults and young people.
(3) Corrie, M (1984). After Special School — report on the second stage of a study of special school leavers. (forthcoming).
(4) Zaklukiewicz, S and Corrie, M (1984). Developments in Further Education for Students with Special Needs — case studies of course provision in colleges of further education. (forthcoming).
(5) Zaklukiewicz, S (1984) Southbrae — a case study of developments and day care for mentally handicapped adults.

Evaluation of Links between Primary Schools and Non-Formal Education Agencies
J Raven (SRO: J L Powell)

An abbreviated version of the final report already submitted to the SED is being prepared with a view to publication before the end of 1984.

Further Education Colleges and Changing Student Needs
A C Ryrie (Principal Researcher), P Small, J Hart, E Gordon
(SRO: A C Ryrie)

This project which began in November 1981 and finished in December 1983, was a study of how further education colleges were adapting and adjusting to changes in the employment situation, to the demand for new courses arising from high unemployment and to the enrolment of students who might otherwise not have gone into further education. Case studies were carried out in nine colleges in Scotland, with a view to exploring four issues: (a) the extent to which these developments were bringing about organisational change both within the colleges themselves and in their relationships with outside bodies; (b) whether the new courses required changes in curriculum or the syllabus of courses and in particular whether the content of new courses was flexible enough to meet the needs of students; (c) the extent to which the introduction of new courses and new types of students was leading to an increased need for guidance, counselling and concern for personal development, (d) whether the new courses were leading to the development of new teaching methods and techniques and to new styles of relationship between staff and students. Information on these topics was gathered mainly by means of interviews with principals and staff of the colleges and by questionnaires to groups of students.

The final report of the project has been submitted to the Scottish Education Department and circulated to all FE colleges and local authorities in Scotland. A booklet, "Changing Student Needs in Further

Education Colleges", summarising the results of the project and relating them to forthcoming developments in further education has been published.

Writing Across the Curriculum, Stage II: Teaching Writing for Learning
E Spencer (Principal Researcher until 31.5.84), C MacDonald
(SRO: J L Powell)

This project, which is funded by the SED, grew out of the earlier descriptive study, Writing Across the Curriculum, Stage 1, reported in *Writing Matters across the Curriculum* and *Written Work in Scottish Secondary Schools.*

Its aims are to establish, in collaboration with teachers, classwork designed to develop certain skills considered to be central to both writing and learning in various subjects, to describe the process by which this work is planned and implemented and to evaluate its effects.

Case studies are under way in a number of schools. In each school, teachers of two subjects incorporate into their syllabus activities designed to help pupils develop skills which have been identified by teachers as important. These may include, for example, "accuracy of definition", "paraphrasing", "note taking", "summarising", "organisation of ideas/information", all aspects of writing mentioned by many teachers of various subjects in the earlier project as potentially falling within their responsibility. Besides their value in communicating information, these skills have evident functions in the process of grasping and clarifying ideas and integrating them with one's existing set of knowledge.

The researchers offer help in planning ways of enabling pupils to practise and improve both thinking and writing in the subjects concerned. The "teaching" mentioned in the project title is understood very broadly to mean any activity intended to help pupils to become better motivated, more confident and more effective thinkers and writers. Accordingly, techniques and suggestions for writing activities are drawn from several sources.

As far as possible, the teaching is organised so that the same group of pupils experience the special writing activities in two subjects. Pupils in S3, S4 and S5 have been involved in the project and the subjects concerned are Chemistry, Physics, Business Studies, Home Economics, History, Geography and English.

The evaluation element in the work of the project consists in description of the effects of the teaching programme on pupils' performance, strategies for writing, and attitudes, and on the teachers' ideas about the place of writing in their courses. Information is obtained by interviews, by observation of the teaching, from records kept by the teachers, and by analysis of pupils' written work. Of particular interest are descriptions of the classroom use of techniques suggested by the researchers.

Some attention is also paid to pupils' general learning strategies, as well as to "writing for learning".

The project is due to be completed by spring 1985. It is expected that its principal outcomes will be material and suggested activities for use in teachers' pre-service and in-service training.

Assessment of Mathematics 1983

G J Pollock, B Duncan (Principal Researchers), W G Thorpe, E Charleson, S Day, M Ireland

This study investigates the feasibility of monitoring standards in mathematics at the P4, P7 and S2 stages.

The work, which began in April 1982, represents an extension of the studies undertaken by the Council on behalf of the Scottish Education Department in 1978 and 1981.

A multi-matrix sampling procedure has been adopted, which allows a more detailed examination of performance in particular areas of the curriculum to be undertaken. Sets of written tests, representing various aspects of mathematics, have been prepared for each age group. These sets contain sufficient items from previous studies to allow comparisons over time to be made at any one stage. In addition there are sufficient overlapping items in the P4 and P7 or the P7 and S2 tests, to allow comparisons by stage to be made.

Apart from evaluating performance at national and at school level, it is intended to analyse individual performance in selected areas of the mathematics curriculum.

Approximately 120 classes (2,000 pupils) at the P4 stage, and 150 classes at the P7 and S2 stages (3,500 and 4,500 pupils respectively) are involved in the assessment.

Running in parallel with the written assessment, an experimental assessment of practical mathematical skills has been carried out. Fieldworkers visited approximately two-thirds of the schools involved in the written tests and assessed pupils' ability to carry out simple practical operations. In each school between 5 and 10 pupils were involved in this aspect of the study.

Both the written and practical assessments were carried out in the period May-June 1983. Analysis of the data is continuing and draft reports are in process of preparation.

The Scottish Restandardisation of the WISC-R

W G Thorpe (Principal Researcher), S Freshwater, D Scott, E Gordon (SRO: W B Dockrell)

The Wechsler Intelligence Scale has been used extensively throughout the world since its first appearance in 1949. In 1974 it underwent a major

revision and restandardisation in the USA. The purpose of the present exercise is to provide norms suitable for Scottish use and to verify whether any alterations to the test are required. In doing this the Council is meeting a request from the Scottish child psychologists particularly those in child guidance.

The primary activity of the current year has been administration of the testing of the sample of 2,000 children between the ages of 7 years and 15 years 11 months. The testing itself is being done by child guidance centres, in the case of children in state schools, and by volunteers for those in special schools. The programme is co-ordinated by SCRE.

It is apparent that the extra work involved in assisting in this project is straining the resources of some educational authorities and of some of the volunteer bodies. About 50% of the data had been collected by the end of the year instead of the planned 75%. It is, however, expected that by the end of the school year the major part of the testing will have been completed successfully.

Analysis of the data will commence in 1984-85 and the final norms are planned for publication in mid-1985.

Education for the Community

A Peacock (Principal Researcher), M Vallely, J Crowther (from July 1983) (SRO: A C Ryrie)

This recently completed project investigated the range of provision in pre-school, youth and adult education in the five community schools studied in earlier projects, and as such has consolidated the team's existing knowledge in this area. The study focused on the different strategies and philosophies behind the various forms of provision, and on participants perceptions of the value of organising activities in these ways.

The research initially involved discussion with the community education staffs in the five schools and their surrounding communities to establish the pattern of activity taking place and the subsequent selection of cases for in-depth study. In each case, observation of the nature of the activity proceeded alongside interviews with a range of participants having different forms of involvement. Cases were selected to give a wide spread of strategies, settings and experience; they therefore included some which were organised within schools and others which were community-based but with school links.

The pre-school, youth and adult education facilities studied have revealed a wide variation in style. The final report sets these in the context of concepts of community education and community schooling. A major concern has been to focus on the extent to which the different facilities have been integrated into a model of education for the community in community schools. It is hoped that such a focus will be of help in the formulation of future policy in relation to these crucial fields.

Evaluation of the Lothian Region Ergonomics Project
M Corrie (Principal Researcher) (SRO: J L Powell)

During 1983-84 SCRE has co-operated with the Lothian Region Educational Advisory Service in evaluating the take-up and practical use of the teaching modules on Ergonomics developed at Napier College by Dr Clive Andrews. Information regarding the actual and expected use made of the modules by those teachers who attended a regional in-sevice seminar was obtained by questionnaire early in the 1983-84 session. Those teachers who indicated that they were likely to be users were subsequently followed up by a further questionnaire towards the end of the session to discover what use had been made of the modules, how useful they had been, and in what ways they had been particularly valuable or had presented problems for themselves or the pupils. A report on the evaluation will be made to Lothian Region.

Induction, Assessment and Guidance in the YTS
A C Ryrie (Principal Researcher), T Leach (SRO: A C Ryrie)

The object of this short project was to examine, describe and compare arrangements for the induction, assessment and guidance of trainees attending colleges of further education under the Youth Training Scheme, with a view to answering the question: How are trainees guided through the system?

The research has been conducted in four colleges drawn from those which had been situated in an earlier project on Further Education Colleges and Changing Student Needs. Contact was maintained at the colleges over a period of months in order to monitor developments as they took place during the first year of the Youth Training Scheme.

The project began in April 1983 and was originally funded for one year; but in view of the delay in the setting up of arrangements for induction, assessment and guidance in many colleges, the project was extended for a further three months, and finished at the end of June 1983. A report has been prepared.

Pakistan Primary Education Project — Consultancies
A C Ryrie (Co-ordinator), W G Thorpe

The Council has continued to provide consultants to the Government of Pakistan, through the British Council, for the evaluation of the Primary Education Project. During the year consultants visited Pakistan to lead a summer school on educational research and evaluation for Pakistani researchers.

Schools' Assessment Research and Support Unit
H D Black (Head of Unit), M Devine (SRO: W B Dockrell)

The Schools' Assessment Research and Support Unit (SARSU) has been established to continue the Council's research programme in

school-based assessment. The Unit has three remits covering action research, exploratory studies and dissemination.

The action research programme for the next two years will centre on studies in the Social Subjects. In parallel with Standard Grade Feasibility trials in Geography, History and Modern Studies, the unit will collaborate with small working parties in three Regions to construct criterion-referenced diagnostic tests, instruments and procedures. In addition to illuminating the strategies most appropriate to diagnostic assessment in these subjects in S3/S4, it is hoped that a resource of instruments will be developed which will be of use to other schools teaching similar courses.

Three more exploratory studies are also planned for the next two years. The first will consider the relationship which various interested groups see as most usefully pertaining between diagnostic assessment and assessment for Standard Grade in S3/S4. Interviews will be conducted with teachers and other educationists to clarify an area of central importance for many classroom teachers.

The two other exploratory studies will focus on English and Mathematics. In both, a small number of case study departments which practice diagnostic or formative approaches will be studied in depth. Practice in each will be described and the issues highlighted for teachers in these subject areas will be discussed.

Finally, the Unit will offer to support local authorities in their in-service programmes for teachers.

Each year the Unit will offer a number of papers or workshops which Authorities can use within their own programmes if they are of interest. In 1984-85, nine such presentations will be available each relating to previous work in school-based assessment carried out by the Council.

Guidance and Choice in the 16-18 Action Plan

A C Ryrie (Principal Researcher), J Hart (SRO: A C Ryrie)

This project, which is being funded by the Scottish Business Education Council and the Scottish Education Department, is being carried out in two stages. The first, preliminary stage began in January 1984 and continues until September 1984. During this period a study is being made of arrangements for choice and guidance for students studying for the Scottish Certificate of Vocational Studies in further education colleges. The SCVS is seen as a precursor to the 16-18 Action Plan, and this study of how students in selected colleges choose between different elements in their course and how arrangements for guidance are working is expected to yield useful insights for the second stage which will focus on the Action Plan itself. A report on the first phase will be ready in the autumn of 1984.

The main part of the project will commence in August 1984 and will last for three years. At this time the 16-18 Action Plan will begin to be implemented. Students will be required to choose between a variety of

40-hour modules and will need guidance in making their choices, as well as pastoral care. This part of the project will consist of a descriptive study of arrangements for choice and guidance as these develop under the new modular system; but it will also have a "participative" or "action" element, in which the researchers will seek to contribute formally and informally to policy making and practice with regard to these arrangements, through contact with colleges and local authorities. The project will focus on six issues: the importance of choice, the opportunity for choice and the criteria used in making choices; and the character, content and structure of guidance. It will be carried on initially in four colleges in different Regions of Scotland and will involve feeding bak information and insights to college staff and regional officials as the project proceeds in addition to the preparation of formal reports.

Educational Opportunities for Young People with Special Educational Needs (EDSPEN)

M Corrie (Principal Researcher) S Zaklukiewicz (SRO: W B Dockrell)

This project extends the work of the earlier project on Further Education for the Handicapped which chiefly involved a small number of case studies of developments for physically handicapped and mildly mentally handicapped young people. The extension, which is also funded by the Scottish Education Department, covers provision for all those in the 16-18 age range with special educational needs in Scotland and is concerned with a wide range of provision but in particular the following sectors:

- college-based provision for those leaving school at 16 through mainstream courses, bridging courses, special courses, special units, and outreach schemes, including the extent to which pupils stay on at school or enter further education
- school-based provision for those staying on at school after 16 including the extent to which school/further education links exist for this group and the extent to which provision is in special schools or ordinary schools
- educational provision in adult training centres, day centres and sheltered workshops
- vocational training and educational schemes provided through the Manpower Services Commission

Regions, national bodies and specific institutions where appropriate are being asked to provide information to cover descriptions of provision, changes in policy, examples of interesting developments and relevant statistical and documentary information.

The aim is to produce a document covering as comprehensively as possible policy and provision. This will describe the general character of the provision available, draw attention to recent developments and

initiatives and discuss some of the issues and implications for further development. It is intended that the document should serve as a guide for education authorities and other bodies with responsibilities and interests in educational provision for young people with special educational needs.

Editorial Work on Modules
M Hutchings (until April 1984), J Crowther (SRO: W B Dockrell)

This short SED-funded project involved editorial work on module descriptors prior to their release to schools, colleges and other educational institutions. The work consisted mainly of checking the appropriateness of the assessment procedures and performance criteria against the learning objectives of each module and, where necessary, raising questions with the "authors" as to appropriate changes.

Scottish Research into Maladjustment, 1974-83
A Peacock (Principal Researcher), K Denvir (SRO: W B Dockrell)

This three-month project, commissioned by the SED, has reviewed all the research on maladjustment carried out for higher degrees in Scottish universities over the past 10 years. The report is intended as an aid to practitioners, supervisors and policy-makers who work in the area of Special Educational Needs, in helping them utilise the findings of this body of research.

The study tabulates the main emphases in the research and sets the findings in the context of the 1981 Education (Scotland) Act.

Research Services Unit
G J Pollock (Head of Unit), W G Thorpe, S Freshwater, E Gordon, M Ireland

The Research Services Unit continues to provide a service for bodies working in the educational field. The work which the Unit undertakes can be classified under three main headings:

1. Professional advice and consultancy—
   (a) on the design and planning of research projects
   (b) on the evaluation of external research projects
   (c) on the selection and use of test materials
   (d) on the selection procedures for training programmes
2. Statistical services and data processing—
   (a) consultation and general advice on statistical matters
   (b) assistance in the analysis of data
   (c) validation of selection procedures
3. Collaboration with other bodies in research projects—
   (a) service on research committees and steering committees
   (b) collaboration in joint projects with external bodies

(c) the carrying out of surveys and other contract work for external bodies

The major activities of the staff consisted of working on the IEA Mathematics and the WISC-R projects as reported elsewhere. Other work undertaken included a month's visit to Pakistan by G Thorpe as statistical/computing consultant to the Primary Education Project.

The Unit was approached twice during the year to draw samples of schools and pupils. Firstly by the National Foundation for Educational Research and secondly by the project monitoring achievement in English at Dundee College of Education. SCOTBEC have also commissioned the Unit to undertake the analysis of data arising from a project on diplomas in Business Studies and in Accountancy. Further assistance in questionnaire analysis and design is being given to the National Trust and to the Joint Committee on Colleges of Education.

Smaller tasks undertaken by the unit were the provision of advice to the SED Statistics Unit on a proposed categorisation of subjects in schools and higher levels of education and lecturing to visitors from the London Institute of Education.

EURYDICE

R Wake (Head of Unit, EURYDICE, Scotland), J Milne

EURYDICE is the Education Information Network of the European Community. It exists to facilitate the exchange of information between policy-makers (both national and local) about policy and practice in the member states of the EEC. The work of the Scottish Unit is funded by the SED.

For a trial period — April 1983 to March 1984 — the bulk of the EURYDICE work — in effect the question answering service — was undertaken by SCRE for the SED. In this year SCRE responded to 93 requests for information on a wide range of topics which included (in addition to the "priority themes" of the transition from school to work, the teaching and learning of modern languages, the education of migrants and admission to higher education) the use of new technologies and the selection and deployment of staff in educational establishments. During this period a priority for the Unit was the establishment of the mechanisms necessary for an effective and authoritative information service through links with central and local government and other relevant bodies.

In April 1984, Mrs R Wake took over as Head of the Scottish EURYDICE Unit, liaison with the SED being maintained through a Joint SCRE/SED Committee. While priority will continue to be given to servicing enquiries, attempts will be made in the coming year (resources permitting) to develop further the links with relevant educational agencies. A limited extension of access to the network (so far restricted to policy-makers in central and local government) is also projected.

SCRE AWARDS

SCRE Fellowship

This triennial award has this year been made to John Nisbet, Professor of Education in the University of Aberdeen. He will be presented with the award and deliver his fellowship lecture at 4.30 pm on 28th September 1984 in the Upper College Hall, University of St Andrews.

Tribute to Professor Nisbet will be found in the Chairman's Report on p 9.

SCRE Silver Medal

The Council's Silver Medal, awarded annually to a Scottish researcher (or a non-Scot working in Scotland) in respect of published research work has, for 1984, been awarded to David Raffe of the Education Department of Edinburgh University, Depute Director of the Centre for Educational Sociology.

SCRE Research Prizes

These prizes are awarded annually for the two best non-doctoral theses in the field of education submitted to a Scottish university in the preceding year, on the basis of nominations by the appropriate departments. For 1984 the awards are as follows:

First Prize: Glenda A White (MEd, Glasgow) for "Silks and Saints: David Stow and Infant Education 1816-1836".

Second Prize: Richard Instrell (MEd, Edinburgh) for "Intervention Strategies in the Curriculum — Media Studies in Scotland".

Special Commendation: James G McNally (MEd Stirling) for "A Teachers' Analysis of Classroom Talk during a Science Investigation".

LIAISON WITH OTHER ORGANISATIONS, 1983-84, INCLUDING CONSULTATIVE AND ADVISORY SERVICES UNDERTAKEN BY STAFF

CCC Committee on Primary Education (J L Powell)
CCC Committee on Secondary Education (W B Dockrell)
CCC Consultative Panel on Drama (W B Dockrell)
Central Region Collaborative Research Advisory Committee (G J Pollock)
City and Guilds Policy Committee for Education and Training (W B Dockrell)

Dundee College of Education *Writing Across the Curriculum Project (Upper Primary and Secondary)*, Advisory Committee (E Spencer)

ERCC Treasury Supported Users Committee (W G Thorpe)
EURYDICE Steering Group (R Wake)

International Association for Educational Assessment (IAEA), Executive Committee (Vice-President) (W B Dockrell)
International Association for the Evaluation of Educational Achievement (IEA), General Assembly (W B Dockrell)
IEA Mathematics, International Committee (G J Pollock)
IEA Transition From School, International Committee (G J Pollock)
IEA Mathematics, Scottish National Committee (W G Thorpe)
Item Banking in Secondary Mathematics Project, Advisory Committee (G J Pollock)

Lanark Division (Strathclyde) Munn/Dunning Steering Committee on Assessment (H D Black)

Moray House College of Education *Assessment in Home Economics Project*, Advisory Committee (H D Black)
Moray House College of Education Research and Development Committee (A C Ryrie)
Munn/Dunning Development Programme: Joint Working Party on English — Consultant (E Spencer)

National Inter-College of Education Committee for Educational Research (E Spencer)

Pathways to the Professions Project, Advisory Committee (J Raven)

SCOTBEC Policy Review Committee (G J Pollock)
SED *Language Monitoring Project*, Steering Committee (E Spencer)
SERA Executive Committee (J L Powell)

Stirling University *Language Skills in English Project*, Steering Committee (E Spencer)

Stirling University *Project on Multi-Disciplinary Courses*, Advisory Committee (A C Ryrie)

PAPERS DELIVERED AT CONFERENCES

H Black

Could do Better — a brief overview of reporting practices in Scottish Schools in 1980. British Educational Research Association Annual Conference, 1983.

"It's ma Faither that Hits me" — some pupils' views on the importance of school reports and their repercussions, British Educational Research Association Annual Conference, 1983.

Criterion-referenced Assessment for Diagnosis — some evidence of its impact on learning and teaching, National INSET course on CRA, Glasgow and Dundee, 1984.

The Evaluation of Criterion-referenced Instruments for Diagnosis, National INSET course on CRA, Glasgow and Dundee, 1984.

M Corrie and S Zaklukiewicz

Leaving Special Education: research needs and priorities, Scottish Educational Research Association Annual Conference, 1983.

Qualitative Research in Special Education: case study approaches, ESRC Workshop on Evaluation in Special Education, University of London, 1984.

W B Dockrell

Testing as Teaching, Assessment for the Teaching/Learning Process, an International Symposium, Ontario Institute for Studies in Education, Toronto, November 1983.

Parental Perceptions of School Based Assessment — A Basis for Action, British Educational Research Association Annual Conference, 1983.

Assessing What Teachers Teach, Assessing School Achievements: Developed Abilities and Specific Performance, IAEA 10th Annual Conference, June 1984.

Practical Research, Scottish Educational Research Association Annual Conference, 1983.

Formative Assessment, Seminar, Tel Aviv University, January 1984.

A Peacock and J Crowther

Role Conflict and the In-Service Training Needs of Community School Staffs, Scottish Educational Research Association Annual Conference, 1983.

G J Pollock

Cross-National Comparisons of Changes in Mathematics Achievement 1964-1984, meeting of IEA National Research Co-ordinators, Stirling, June 1984.

J L Powell

Objectivity, Subjectivity, and Value Judgements in the Context of Classroom Observation of Teaching Styles, AERA, New Orleans, 27th April 1984.

J Raven

Towards New Models of Persons in Psychometrics and *The Role of the Psychologist in a Modern Political Economy*, International Congress of Political Psychology, Oxford, July 1983.

An Evaluation of the Links Established between Primary Schools and Agencies of Non-formal Education such as Zoos and Museums, British Educational Research Association, London, September 1983.

Quality of Life, the Development of Competence and Higher Education and *Some Lessons from an Action-research Programme designed to help Student Teachers to develop important Teaching Competencies* Fourth International Congress of the European Association for Research and Development in Higher Education, Frankfurt, 5th-10th September 1983.

An Evaluation of the Links Established between Primary Schools and Agencies of Non-formal Education such as Zoos and Museums (tabled paper), Directors of Educational Research Institutes Congress, Council of Europe, Austria, December 1983.

The Role of the Psychologist in Promoting Economic and Social Development in Modern Society, British Psychological Society, Occupational Psychology Section Conference, 7th January 1984.

New Models in Psychometrics, and the Role of the School Psychologist, Washington, Oregon, and Idaho Association of School Psychologists, Annual Meeting, Oregon, May 1984.

Excellence in Education, and the Varieties of Giftedness, National Association of Gifted Educators, Lansing, Michegan, May 1984.

Meetings and Seminars

Throughout the year Council staff have continued to contribute to teacher in-service courses and workshops. Successful additions to this have been a number of lectures and seminars arranged by SCRE on a variety of themes aimed at specific audiences — administrators, industrialists and researchers as well as teachers. The major event was the visit of Professor James Popham of UCLA to lead discussion on criterion-referenced testing. Two one-day meetings, each comprising a

lecture and workshops, were held, one in Edinburgh, and one, organised by Strathclyde Region Education Department, in Glasgow. Professor Popham also gave an invitational seminar. Other meetings included addresses by Professor Lilian Katz of the University of Illinois, Urbana ("A New Look at the Curriculum in Early Childhood Education"); a seminar, organised jointly with the Scottish Council of Development and Industry, on "The Management of Change in Education and Industry"; and a meeting, convened by SCRE, of interested parties with the Education and Human Development Board of the Education and Social Research Council.

STAFF PUBLICATIONS

External

M Corrie and S Zaklukiewicz

'Leaving Special School: Issues for Research', *Scottish Educational Review*, May 1984.

W B Dockrell

'Ethical Considerations in Research', in *The International Encyclopaedia of Education* (ed. Husen and Postlethwaite) Pergamon, 1984.

'Styles of Educational Research on Two Sides of the Atlantic', in *Advances in Reading/Language Research*, JAI Press, 1984.

J Raven

'The Relationship between Educational Institutions & Society with particular Reference to the Role of Assessment', *Internation Review of Applied Psychology* 32, 1983.

'Progressive Matrices: Stability and Change in Western Societies,' in Irvine, S H and Berry, J (eds) *Human Assessment and Cultural Factors*, Plenum Press, New York, 1983

'Raven Progressive Matrices in Thailand and Denmark: a response', *School Psychology International*, 4, 1983.

'New Horizons in Education', *New Horizons*, 24, 1983.

The Edinburgh Questionnaires: A Cluster of Questionnaires for Use in Staff Guidance, Placement and Development and in Organisational Development, H K Lewis, London, 1983.

'The Role of the Psychologist in Formulating, Administering and Evaluating Policies Associated with Economic and Social Development in Western Society', *Journal of Economic Psychology*, 5, 1984.

Economic Policy in Modern Society, The Tawney Society, London, 1984.

'Some Barriers to Educational Innovation from Outside The School System', *Teachers College Record*, 85, 1984.

'Quality of Life, The Development of Competence and Higher Education', *Proceedings of IVth International Congress of the European Association for Research Development in Higher Education*, Vol III, 1984. Also to be published in *Higher Education*, 1984, Vol 13.

J Raven and T Varley

'A Survey of the Extent and Nature of Out-of-School visits by Primary Schools in Lothian and Fife Regions', *Collected Original Resources in Education*, Vol 7, No 2, F4, D13, 1983.

'Some Classrooms and their Effects', *Collected Original Resources in Education*, March 1984, Vol 8, F4, G6, 1984.

Internal

Books by H D Black, W B Dockrell, J Hart, I MacFadyen, M McMillan, J L Powell, E Spencer, and A C Ryrie and published by SCRE are listed in the general list of SCRE publications at the end of this report.

Scottish Council for Research in Education

ACCOUNTS FOR THE YEAR ENDED 31st MARCH 1984

BALANCE SHEET AS AT 31st MARCH 1984

	£	*1984* £	*1983* £
Fixed Assets			
Tangible Assets:			
Office Furniture, Furnishings and Equipment (Note 4)		7,575	15,150
Current Assets			
Sundry Debtors	21,027		45,216
Cash at bank and in hand:			
Cash on Deposit	1,591		1,494
Cash in Bank Current Account	56,493		60,249
Cash in Hand	59		45
	79,170		107,004
Creditors: amounts falling due within one year			
Sundry Creditors	18,087		40,436
Net Current Assets		61,083	66,568
Total Assets less *Current Liabilities*		68,658	81,718
Capital and Reserves (Note 5)			
Publications Fund		13,362	20,000
Maintenance and Replacement Fund		6,000	5,500
General Fund		49,296	56,218
		68,658	81,718

Hugh Fairlie, *Member of Council*

John Hume, *Member of Council*

Scottish Council for Research in Education

INCOME AND EXPENDITURE ACCOUNT
FOR THE YEAR ENDED 31st MARCH 1984

	Note	1983-84 £	1982-83 £
Income			
Support Grants and Donations	1	330,579	315,737
Contributions towards costs of projects	2	215,360	234,750
Other Income	3	1,080	360
Interest on Deposits		254	160
		547,273	551,007
Expenditure			
Specially Funded Research Projects	2	254,034	269,341
Other Projects, Services and Grants	3	107,147	115,538
		361,181	384,879
General Expenditure —balance after allocation of £40,588 (1982-83 £34,182) to Research Projects and other services		193,014	168,555
		554,195	553,434
DEFICIT for Year	5	(6,922)	(2,427)
NOTE: General Expenditure includes:			
Depreciation		7,575	8,768
Audit and Accounting Fees		2,741	3,565

REPORT OF THE AUDITORS TO THE MEMBERS OF THE SCOTTISH COUNCIL FOR RESEARCH IN EDUCATION

We have examined the foregoing Balance Sheet, Income and Expenditure Account, and the attached Notes on Accounts which have been prepared under the historical cost convention. In our opinion the Accounts comply with the Companies Acts 1948 to 1981 insofar as the provisions of these Acts apply to these financial statements, and together with the Cash Account give a true and fair view of the state of affairs of the Company as at 31st March 1984 and of the Deficit and of the Source and Application of Funds for the year ended that date.

ROBERTSON, CARPHIN & CO, CA.
Edinburgh, 31st May 1984

ACCOUNTING POLICIES

A. *Basis of Accounting*
The Council is constituted as a company limited by guarantee and to comply with normal Companies Act accounting conventions, prepares its accounts on the historical cost basis using the accruals concept.

B. *Depreciation*
With effect from 1st April 1983, Office furniture, furnishings and equipment are written off to Income and Expenditure Account in the year in which they were acquired. Assets held at 1st April will be depreciated on a straight line basis over a period of two years.

C. *Taxation*
The Council has charitable status as an educational body and accordingly has no Corporation Tax liabilities on revenue surpluses or untaxed interest.

D. *Publications Fund*
In order to avoid depletion or distortion of the Council's income and expenditure in any one year, the costs of publishing research findings are normally charged to the Publications Fund. The Fund is maintained from sales of these publications as and when they take place, from grants, and from periodical transfers from the Income and Expenditure Account. No value is placed on stocks of unsold publications.

E. *Maintenance and Replacement Fund*
The Maintenance Fund has been set up to meet extraordinary expenditure.

F. *Statement of Source and Application of Funds*
To comply with a standard accounting practice, the Council should prepare a statement showing the source and application of funds. The format normally used by commercial organisations is not considered appropriate for the Council, and Note 7 summarises cash transactions (Receipts and Payments) for the year in a way which it is believed satisfies the objectives of the standard accounting practice referred to.

NOTES ON ACCOUNTS

1. Support Grants and Donations

		1983-84	1982-83
		£	£
Scottish Education Department		297,500	304,000
Less: Special Grants		—	20,000
		297,500	284,000
Scottish Regional Education Authorities	£		
Borders	610		
Central	1,665		
Dumfries and Galloway	884		
Fife	2,180		
Grampian	2,989		
Highland	1,190		
Lothian	4,570		
Shetland	145		
Strathclyde	14,000		
Tayside	2,416		
Western Isles	—		
Orkney	120		
		30,769	29,492
Educational Institute of Scotland		1,500	1,500
Local and District Associations of Educational Institute of Scotland:			
Aberdeen	10		
Shetland	5		
Banff	60		
Ettrick	10		
Central	80		
Gordon	35		
Kincardine and Deeside	10		
Roxburgh	35		
Caithness	25		
		270	205
Other Grants			
Scottish Educational Research Association	500		
Association of Assistant Headteachers Early Education	40		
		540	540
		330,579	315,737

2. Specially Funded Research Projects	*Expenditure* £	*Recoverable* £
SED		
EDSPEN*	7,038	5,158
1983 Maths Assessment	52,970	47,357
16-18 Modules	6,425	6,296
Maladjustment	4,069	2,769
Further Education Colleges and Student Needs	25,797	22,797
Non-Formal Education	1,735	1,500
Further Education for the Handicapped*	24,782	13,867
Modules	1,725	600
1983 Mathematics Practical	7,230	7,230
Youth Training Schemes	16,133	15,133
SED/Local Authorities		
Writing Across The Curriculum Phase II	28,861	27,373
COSLA Resource Unit*	19,945	11,503
Local Authorities		
Ergonomics	3,526	3,150
Others		
Pakistan Primary Education	7,238	6,898
Evaluation of Craigroyston Curriculum	18,437	17,495
Education for the Community	26,000	24,111
SCOTBEC Modules	2,123	2,123
	254,034	215,360

* Project jointly funded by SCRE and Sponsor(s)

3. Other Projects, Services and Grants		
Research Services Unit		
General Services	34,067	
IEA Mathematics Survey	10,442	
WISC Revision	12,589	
Information Services and Library	39,541	
Grants	325	
Teaching Strategies in the Primary School	8,449	
Special Conference	1,080	1,080
Lanark Assessment Programme	654	
	107,147	1,080

Explanatory note on Expenditure

Expenditure includes, in addition to the direct costs and recoverable overheads, a proportion of senior staff costs not normally charged to the sponsoring body.

4. Office Furniture, Furnishings and Equipment Cost	*1983-84*	*1982-83*
	£	£
Cost at beginning of year	44,451	25,633
Expenditure during year	—	38,818
	44,451	64,451
Grants from SED	—	20,000
Total Cost at 31.3.84	44,451	44,451
Depreciation		
Balance at beginning of year	29,301	20,533
Depreciation charge for year	7,575	8,768
Balance at 31.3.84	38,876	29,301
Cost less Aggregate Depreciation	7,575	15,150

5. Movement of Funds		
Publications Fund		
Transfer from Income and Expenditure Account	1,000	1,302
Income during year	15,902	12,639
	16,902	13,941
Less: Expenditure	23,540	14,941
	(6,638)	(1,000)
Fund at beginning of year	20,000	21,000
Fund at end of year	13,362	20,000
Maintenance and Replacement Fund		
Transfer from Income and Expenditure Account	500	1,000
Fund at beginning of year	5,500	4,500
Fund at end of year	6,000	5,500
General Fund		
Fund at beginning of year	56,218	58,645
Deficit for year	(6,922)	(2,427)
Fund at end of year	49,296	56,218

6. **Employees**
The average number of persons employed in each week of the financial year was 35 (39) and the aggregate remuneration was £337,098 (£ 36,110).

7. Cash Account for Year ended 31st March 1984

	1983-84 £	*1982-83* £
Receipts		
Support Grants and Donations	331,112	315,204
Interest and Miscellaneous Income	3,416	472
Sales of Publications	21,005	11,529
Contribution to Specific Non-recurring Expenses Equipment	—	20,000
Recovery of Project Costs	231,178	225,236
	586,711	573,441
Payments		
General Expenditure:		
Salaries and Other Employment Costs	108,516	129,096
Accommodation	40,380	33,512
Other	38,579	18,999
Research and Information Services	79,302	52,973
Publications	35,714	6,140
Capital Expenditure and Equipment	—	39,123
Expenditure on Specific Research Projects (including SCRE "Internal Projects")	287,865	299,110
	590,356	578,953
Deficit of Receipts over Expenditure	(3,645)	(5,512)
Opening Balance of Cash Funds	61,788	67,300
Closing Balance of Cash Funds	58,143	61,788

Note: Differences between cash receipts and payments and the figures in the Income and Expenditure Account reflect the "accrual basis" used in the latter account — expenses unpaid at the year end appear as creditors and sums due not yet received in cash appear as debtors in the Balance Sheet.

Occasional Paper

OBJECTIVITY, SUBJECTIVITY, AND VALUE JUDGEMENTS IN THE CONTEXT OF CLASSROOM OBSERVATION OF TEACHING STYLES

(An abbreviated version of the paper delivered by John L Powell at the annual meeting of the American Educational Research Association in New Orleans, in April 1983. The matters discussed arise from his book The Teacher's Craft, *which is to be published later this year.)*

In addition to the 'low-inference' classroom observation instruments, of which larger numbers have been produced in recent years, there is a need for instruments capable of producing data on a large number of variables simultaneously without disturbing the normal functioning of classes by the use of video recording. It is argued that (a) the subjectivity can be controlled in the latter, despite the higher inference levels involved, and (b) that the level of subjectivity involved in 'low-inference' instruments is far greater than is generally acknowledged. The case is illustrated with reference to the author's SCOTS schedule.

In its seeking after accuracy of measurement, so much of the vast amount of research based on classroom observation concentrates attention on very narrow spheres of activity. Useful as such studies are, there is a need also for studies that can take a more broadly-based view of classroom activity, ones that can look at a large number of variants at one and the same time.

One approach to this problem is of course to make video recordings of classroom activity and to subject the recordings to repeated analysis using any number of available systems for measuring with some precision each of a wide range of variables. But all such work is open to the limitation that the making of the video-tape in itself creates an abnormal classroom situation, whether the video equipment be taken into an ordinary classroom or the students be brought into a studio setting.

If multi-faceted recording of classroom activities is to be undertaken in ordinary classrooms with nothing more than the presence of an observer to affect the normality of the situations, quite different observational techniques are required. Such techniques for use in the primary school have been developed by the present author in Scotland in an observation schedule known as *The System for the Classroom Observation of Teaching Strategies (SCOTS).*

The SCOTS schedule calls for higher levels of inference on the part of the observer than many researchers may find acceptable. It is the function of this paper to argue that inference can be controlled within

acceptable limits, and that the issues of objectivity and subjectivity in observational instruments are more complex than is generally acknowledged.

It is only too easy to suppose that because a measurement in itself is clearly objective — as when, for instance, the identity of the person initiating an oral interaction is noted as each interaction occurs, or as when type of activity for a number of individuals is recorded at short but regular time intervals — that the conclusions drawn are necessarily objective. In some cases, of course, they are, but since most of the questions researchers seek to answer require data more complex than these measures are able to provide directly, these measures are commonly related one to another — by the calculation of ratios, for instance. As soon as such second-order procedures are adopted, subjectivity has crept in (over and above that which is involved in any case through the choice of what to measure). The more complex the inferential procedures, the greater the subjectivity of the interpretation.

It is no part of the case being put forward in this paper that such use of subjective judgement is in any way reprehensible. It is, on the contrary, clearly essential. What is being stressed is that any worth-while conclusions of other than the very simplest nature require the use of inference. It is the basis of anything that we may presume to call understanding.

In the case of inferences based on data collected in a highly objective way — we have already instanced the recording of who initiates an interaction — the researcher makes his inferences away from the scene where the data were collected, or at least at a different time. He does not, therefore, in making his judgements, have the advantage of a wide range of contextual information that could with advantage affect how he draws his inferences. The observer who draws inferences live 'at the scene of action' has — particularly if he is a skilled and trained observer — the potentiality of being able to reach conclusions based on a far wider range of factors.

There is, of course, the obvious risk of bias, conscious or unconscious, on the part of an observer drawing inferences 'live'. A high inference observation schedule such as SCOTS does however seek to provide a controlling framework to minimise bias while still permitting the use of human interpretative skills.

The risk of bias is clearly greatest when judgements are wide-ranging. Accordingly the SCOTS schedule concentrates on 43 separate but partly overlapping variables believed to be constituent parts of a teacher's overall teaching style or strategy (see Table 1). The task of the observer is to place the teacher being observed on a defined continuum for each variable. (Such points — usually five in number — are defined in fairly general terms but supported by examples and a good deal of 'case law' built up over time by the observers in consultation.) The observer is aided in so doing by his carefully noting during the observations (of which

TABLE 1

SCOTS SCHEDULE: ANALYSIS OF ITEMS

Items relating to:		
(a) Teaching Skills	(4)	Variation of treatment according to student needs
	(10)	Integration of knowledge
	(11)	Teaching for memorisation/ understanding
	(12)	Encouragement/promotion of difference
	(13)	Mode of cognitive questioning
	(14)	Clarity of exposition of basic principles
	(15)	Variety and inventiveness of explanation
(b) Feedback and Individual Aid	(16)	Nature and frequency of contacts with the individual students
	(17)	Feedback to students
(c) Pupil Interest and Motivation	(18)	Stimulativeness/dullness of teaching (or teaching situation)
	(21)	Extrinsic/intrinsic motivation
	(22)	Competition
	(39)	Negative/positive approach
(d) Development of Responsibility	(6)	Directness of control of pupil learning activities
	(7)	Pupil responsibility for managing own work
	(9)	Teacher pressure to secure work
	(20)	Fostering a sense of responsibility
	(34)	Encouragement/prevention of inter-student co-operation
	(35)	Constraint on student movement
	(36)	Freedom of access to resources
(e) Level aimed at	(5)	Teacher objectives (relating to cognitive outcomes)

(f) Grouping Practices	(2)	Used number of difficulty levels for arithmetic
	(3)	Used number of difficulty levels for English
	(31)	Variation of treatment according to student needs
	(32)	Size of teaching groups for arithmetic
	(33)	Size of teaching groups for English
(g) Efficiency of Management	(25)	Student application to work/work avoidance
	(27)	Student under-employment
	(28)	Time-lag between activities
	(29)	Mode of performing administrative functions
	(30)	Extent of teacher's attention to class
(h) Authoritarianism and coercion	(9)	Authoritarian/democratic practices
	(24)	Teacher mode of exercising control
(i) Class Control	(37)	Teacher overt anxiety/calmness
	(42)	Teacher hostility
	(43)	Degree of teacher control achieved
(j) Relationship with Students	(19)	Teacher sensitivity to student self-confidence
	(40)	Teacher-student social relationship
	(41)	Apparent teacher attitude to class
(k) Miscellaneous	(1)	Visible differentiation by ability
	(23)	Teacher use of rational argument to support commands
	(26)	Pupil talk
	(38)	Noisy/quiet teacher

there are usually five, each extending for a quarter of a school day) the events, sayings, etc that he recognises as having a bearing on the coding of one or more of the variables. Provisional codings are made at the end of each observation and final ratings are based on these. Some of these ratings have to take cognisance of differences that arise from different types of class activity used by the same teacher.

Of course not all items relate to teacher characteristics that remain fairly constant on all occasions. Where they do not, the summative coding made after the final observation has to take account of the variation that has occurred and accordingly a special 'summative' form of the item is used for such items.

It would of course be disturbing if the codings for a teacher were to depend to any significant extent on who undertakes the observation — on the observer's prejudices, individual interpretive framework, or whatever — but it has been shown that, when *a trained team of observers who have worked together over a period of time* carry out the observations, a very high level of inter-observer agreement can be achieved.

Some have argued that where high levels of inter-observer agreement — ie, 'reliability' — have been established, the data can be said to be 'objective'. Such a notion does, however, have to be questioned in the light of an analysis of what inter-observer agreement really indicates. It does *not* mean that some form of objective 'reality' has been established, but rather that uniform criteria have been applied to phenomena jointly observed. The criteria applied are themselves the product of decisions to note particular features of the situation observed and to apply certain predetermined interpretations to them. Both of these decisions may reasonably be called subjective. The 'objectivity' of the observers is in fact a *shared subjectivity*.

A charge that may be levelled against the SCOTE schedule is that it has value judgements built into it. This is denied, for, although it is possible for anyone, the observer included, to regard as best any particular category of any item and although there may be widespread agreement on the matter, it is possible for different people to come up with value judgements that differ. Thus, for example, in the case of item 20, people may differ about the need to develop a sense of responsibility in pupils and about the best ways of achieving it. The value judgements rest with the individual and are not inherent in the schedule. Where the observer's judgement comes into play is not in respect of values. He uses judgement where he sees the significance of particular behaviours normally interpreted one particular way as meriting a different interpretation because the situation in which they occur has changed their meaning or significance. Training and a developed 'case law' help observers to apply such judgements in a common way.

Conclusion

The case argued in this paper points to the need to look more searchingly at the concepts of objectivity and subjectivity as applied in the field of classroom observation, at the danger of under-exploiting the interpretive skills of observers where broad criteria are provided, and at the possibility of providing in a single set of observations (unencumbered by video and sound recording apparatus) a wide-ranging and acceptably accurate record of a teacher's teaching style. It opens up opportunities in a number of areas including both pre-service and in-service training of teachers.

A LIST OF RESEARCHES RELATING TO EDUCATION

Presented for postgraduate degrees
in Scottish Universities

1983

Researches are Classified Broadly Under the Following Headings:

Adjustment/Maladjustment/Delinquency
Community Education
Curriculum Studies
Education Overseas
History of Education
Learning/Attainment (see also Psychology)
Organisation/Administration of Education
Post-Compulsory Education
Pre-School Education
Primary Education
Psychology (see also Adjustment/Maladjustment/Delinquency; Special Education; Learning/Attainment)
Secondary Education (not otherwise classified)
Sex/Gender Differences
Social Work
Special Educational Needs
Teacher Education/Development
Teachers
Teaching
Theory, Principles and Philosophy of Education
Women

ADJUSTMENT/MALADJUSTMENT/DISCIPLINE

(1) **Davidson, Janet M** Egocentrism and reasoning in maladjusted adolescents. MEd, Dundee

(2) **De Beaux, Patricia A** Discipline and punishment in primary schools: some perceptions of pupils and parents. MEd, Aberdeen

(3) **Keighren, K** Child guidance and the children's panel. MSc, Edinburgh

(4) **Lyner, Catherine** The effects of school ethos on teacher attitudes with particular reference to attitudes towards pupils who play truant. MAppSci, Glasgow

(5) **MacFarlane, Eve S** Attitudes to authority and delinquency amongst 2nd and 4th year secondary school pupils. MEd, Dundee

(6) **Quinn, Gerard M** Corporal punishment and the alternative sanctions. MEd, Dundee

(7) **Pinchuck, David** A case study of the special unit at Prestonville High School: an ethnographical approach. MSc, Edinburgh

(8) **Reid, Gordon** Stress: its implications for professionals working with children with behavioural difficulties. MEd, Aberdeen

See also *(60)* **Roy, Archie S** (66) **Munro, Shona**

COMMUNITY EDUCATION

(9) **Cairns, Gerrard** The potential and limitations of the community education service as an education service, with special reference to Lothian Region. MEd, Edinburgh

(10) **Foster, Alan** The implications of community schooling for the work of teachers. MEd, Edinburgh

(11) **Morrison, Marlene** Community participation in leisure activities in the Newburgh area. MEd, Aberdeen

See also (36) **Watanasuntorn, Kanjana**

CURRICULUM STUDIES *(further divided by subject)*

(12) **Reid, W B** Teacher perceptions of curriculum. Continuity in the three-tier system in Grangemouth and the influence of guidelines and liaison in facilitating such continuity. MEd, Stirling

Curriculum and Assessment

(13) **Boa_, Henry C** A study of the assessment of practical skills in science. MEd, Edinburgh

(14) **Fleming, Morna R** Curriculum and assessment for non-certificate pupils following the foundation course in English. MEd, Dundee

(15) **Hutchison, Paul N** The experience of one school in piloting a Munn and Dunning type foundation-level course. MEd, Edinburgh

See also (18) **Smith, G H**

Accounting

(16) **Wilson, Norman P** The teaching of accounting in schools. MEd, Edinburgh

Art

(17) **Crombie, Margaret H** A policy for art education in the lower primary school: conceptualization and implementation. MEd, Glasgow

History

(18) **Smith, G H** Assessment policies in history — time for change. MEd, Stirling

Language

(19) **Davies, Robert** Norms for a Welsh spelling test. MSc, Edinburgh

(20) **Holligan, Christopher P** Bilingualism and phonological processing: a study of phonological decoding in the language storage system. MEd, Aberdeen

(21) **McReynolds, M F** Non-standard English and its implications for reading instruction. MEd, Edinburgh

(22) **Stevenson, J B** Teachers' and pupils' perceptions of the published version of Tour de France stage 1. MEd, Stirling

See also (14) **Fleming, Morna R** (32) **Adeodu, Rachel A** (48) **Grant, James H**

Maths

See (46) **Palermo, Lorna P**

Media Studies

(23) **Instrell, Richard D** Intervention strategies in the curriculum — media studies in Scotland. MEd, Edinburgh

Music

(24) **Pawlak, S** Music in the early stages of secondary education — an alternative approach. MEd, Stirling

Physical Education/Sport

(25) **Garden, Athol G R** Participation and non-participation in physical education. MEd, Aberdeen

(26) **Rettie, Robert J** Sport, leisure and private schooling: a case study of two independent schools. MEd, Aberdeen

See also (11) **Morrison, Marlene** (89) **McGowan, Ian**

Science

(27) **Hay, A M A** review of biology in the Scottish secondary school curriculum. MEd, Stirling

(28) **McNally, J G A** teacher's analysis of classroom talk during a science investigation. MEd, Stirling

(29) **Watson, Robert J** "Terra" A study in attitude change among secondary science pupils by means of an interactive course. MEd, Glasgow

See also (13) **Boag, Henry C**

Social Subjects

(30) **Murray, Elizabeth** Parentcraft — who wants it? an enquiry into the need to provide adolescents with a formal preparation for parenthood. MAppSci, Glasgow

(31) **Murray, J** Integration of the social subjects in SI and SII — What the teachers think. MEd, Stirling

EDUCATION OVERSEAS

(32) **Adeodu, Rachel A** The use of indigenous languages in Nigerian primary schools: political and educational implications. MEd, Glasgow

(33) **Khunji, Farida** Innovation and change in progressive primary education: a case study of the integrated day and its implications for education in Bahrain. MEd, Edinburgh

(34) **Long, C W R** Education in Colombia: a view of present and future. MEd, Edinburgh

(35) **Pena Borrero, Margarita** Education and technological self-reliance in the third world. MSc, Edinburgh

(36) **Watanasuntorn, Kanjana** The origins and development of policies in community schools in Thailand. MSc, Edinburgh

See also (71) **Kotze, Frans** (94) **Olabisi, Bolanle**

HISTORY OF EDUCATION

(37) **Ferguson, J M** Aberdeen Mechanics Institution — The early years (1824-1836). MPhil, Dundee

(38) **Henley, Elizabeth M** The effects of the 1870 Education Act upon the provision of elementary education in Woking and Dorking. MEd, Aberdeen

(39) **O'Reilly, R G** The effect of the Education (Scotland) Act 1872 on education in Clackmannanshire. MEd, Stirling

(40) **Russell, Colin W** The Education (Scotland) Act 1981. A conceptual and historical analysis of its origins, implications and functions.

(41) **White, Glenda A** "Silk and saints": David Stow and infant education 1816-1836 MEd, Glasgow

See also (47) **Fraser, J M**

HEALTH EDUCATION

(42) **Reed, Fiona M** Scottish Women's Health Fair. MSc, Edinburgh

LEARNING/ATTAINMENT *(see also Psychology)*

(43) **Joyce, Maureen** Performance of left-handed and right-handed schoolchildren on concurrent verbal and unimanual indoor tasks. MEd, Aberdeen

(44) **Keane, Donald Anthony** Failure in the classroom: 'learned helplessness', and the effect of the teacher's attribution for failure. MEd, Glasgow

(45) **McCluskey, George** Factors associated with achievement in the comprehensive school. MEd, Dundee

(46) **Palermo, Lorna P** An investigation of the relationship between mathematics achievement and two measures of cognitive style. MEd, Aberdeen

ORGANISATION/ADMINISTRATION OF EDUCATION

(47) **Fraser, J M** The decline of autonomy of British universities in the Robbin's era 1963-1983. MEd, Stirling

(48) **Grant, James H** An investigation into the feasibility of establishing Gaelic/English bilingual primary schools on the mainland of Scotland. MPhil, Glasgow

Institutional Level

(49) **Antzoulatos, Joyce L** The developments of change in a secondary school: a case study. MEd, Glasgow

(50) **Clark, B R** A study in school government. MEd, Stirling

(51) **Maclean, Ronald D** Scottish Further Education College Councils and their operation in Lothian Region. MEd, Edinburgh

(52) **Younis, T** Management processes and structures in a tertiary education college in Scotland. MEd, Stirling

See also (12) **Reid, W B** (15) **Hutchinson, Paul N** (88) **Elfick, Ian H E**

POST-COMPULSORY EDUCATION

(53) **McEwen, Melvyn G** An examination of the links between unqualified, unemployed young people, the Manpower Services Commission and further education. MEd, Edinburgh

See also (10) **Foster, Alan**
(37) **Ferguson, J M**
(58) **Pike, Margaret**
(92) **MacDonald, Andrew**

Further Education Colleges

See (51) **Maclean, Ronald D**
(52) **Younis, T**
(78) **Mallon, James**
(87) **Roberts, Carmen**

Universities

See (47) **Fraser, J M** (89) **McGowan, Ian**

PRE-SCHOOL EDUCATION

(54) **Whitehouse, Charmaine** The influence of age mix on children's behaviour in family-group day nurseries. MSc, Strathclyde

See also (79) **Maxwell, Agnes W**

PRIMARY EDUCATION

See (2) **De Beaux, Patricia A**
(17) **Crombie, Margaret H**
(32) **Adeodu, Rachel A**
(33) **Khuaji, Farida**
(41) **White, Glenda A**
(48) **Grant, James H**
(59) **Porter, E L**
(68) **Robbie, G**

PSYCHOLOGY *(see also Adjustment/Maladjustment/Delinquency; Special Education; Learning/Attainment)*

(55) **Donaldson, Morag L** Psycho-linguistic study of children's explanations. PhD, Edinburgh

(56) **Donehower, Nancy L** Constructing gender: a study of development of gender concepts. PhD, Edinburgh

(57) **Macdonald, Carol A** Children's use and understanding of modal expression. PhD, Edinburgh

(58) **Pike, Margaret** Disengagement and activity theories of retirement: an empirical and theoretical analysis. MSc, Edinburgh

(59) **Porter, E L** An exploratory study of the dreams of the 8-9 year old child. MAppSci, Glasgow

(60) **Roy, Archie S** The development of social rule perception in childhood: law and social convention. MSc, Strathclyde

(61) **Scott, Ian D** A study to show how we define common animals. MEd, Dundee

(62) **Thompson, Janet** An examination of the relationship between the cognitive abilities of children and their motor performance. MPhil, Dundee

(63) **Walley, Christina** An investigation into the role of schemata in the recall of adversarial text. MEd, Dundee

See also (8) **Reid, Gordon**
(20) **Holligan, Christopher P**
(43) **Joyce, Maureen**

SECONDARY EDUCATION (not otherwise classified)

(64) **Cooper, P W** Ideology, education and work. A study of the effects of ideology on school pupils' attitudes to the adult world of work. MEd, Dundee

(65) **Foster, Andrew** A survey of students' attitudes to further education compared with secondary education. MEd, Edinburgh

(66) **Munro, Shona** COULD DO BETTER . . . A report on some secondary pupils' views on their present and future. MAppSci, Glasgow

See also (84) **Whitelaw, Margaret**

SEX/GENDER DIFFERENCES

(67) **Mackenzie, Rory D** A preliminary study of sex role stereotyping in a Scottish secondary school MEd, Edinburgh

(68) **Robbie, G** A study of gender differentiation within physical education in a Scottish primary school. MEd, Stirling

(69) **Wann, George** A Sex-role stereotyping: a discussion of experiences and some educational and vocational implications. MEd, Edinburgh

See also (56) **Donehower, Nancy L**

SOCIAL WORK

(70) **Flannigan, R B** An analysis of the 1982 Child Abuse and Neglect Case Conference Minutes, recorded by the social work department of the Royal Hospital for Sick Children, Edinburgh. MSc, Edinburgh

(71) **Kotze, Frans** Problems and potentialities of developing education functions as a part of social work in a South African context. MSc, Edinburgh

(72) **Main, Leslie J S** Foster care — trends and perceptions. MEd, Edinburgh

See also (93) **Keen, Jawed V E**

SPECIAL EDUCATIONAL NEEDS

(73) **Dockrell, J E** Toy libraries: what's in a name? MAppSci, Glasgow

(74) **Inglis, Janet R** An evaluation of a counselling group for senior secondary pupils with specific learning difficulties. MSc, Edinburgh

(75) **Latham, R K** Parents' questions pertaining to their neurologically impaired children in the Royal Hospital for Sick Children, Edinburgh. MSc, Edinburgh

(76) **Lusby, H D** Compensatory education: the provision for less able pupils in a rural school. MEd, Dundee

(77) **MacFarlane, Gertrude** Reducation of stereotyped behaviour in the profoundly handicapped: a case study. MEd, Dundee

(78) **Mallon, James** Problems consequent upon implementation of the recommendations of the Warnock Committee, in regard to young people with special educational needs, in a college of further education. MEd, Edinburgh

(79) **Maxwell, Agnes W** The 'named person' in relation to pre-school children with special educational needs. MEd, Dundee

(80) **Montgomery, Sandra** Effects of structures teaching in contact and manipulative activities in profoundly handicapped children 'Pethna' toy system. MAppSci, Glasgow.

(81) **Smith, Gillian** Work patterns, assessment practices and current strategies used for the recording of children with special educational needs, of educational psychologists. MAppSci, Glasgow

(82) **Stewart, Ruth M** An investigation of self, toy and person-directed behaviour in school age mentally handicapped children. MSc, Strathclyde

(83) **Tweedlie, Moira** A follow-up study with specific developmental language disorders. MAppSci, Glasgow

(84) **Whitelaw, Margaret** Evaluation of a leavers programme in a special school in terms of its capacity to increase independence in young people ascertained as having mild learning difficulties. MAppSci, Glasgow

(85) **Woolley, Jane E** Case study of a language disordered child. MSc, Edinburgh

See also (82) **Stewart, Ruth M**
(86) **Brook, Julian**
(88) **Elfick, Ian H E**

TEACHER EDUCATION/DEVELOPMENT

(86) **Brook, Julian** A description and evaluation of an in-service training course in the use of behavioural methods for staff in a school for mentally handicapped children, incorporating a workshop to train psychologists. MSc, Edinburgh

(87) **Roberts, Carmen** The training needs of lecturers in colleges of further education who may teach the disabled. MEd, Edinburgh

TEACHERS

(88) **Elfick, Ian H E** The role of the head teacher in special education. MEd, Edinburgh

(89) **McGowan, Ian** A longitudinal comparison of physically active and inactive university teachers in their middle years. MEd, Aberdeen

See also (10) **Foster, Alan**

TEACHING

(90) **Wilson, Maureen** The small-school teaching situation. MEd, Edinburgh

See also (22) **Stevenson, J B** (28) **McNally, J G**

THEORY, PRINCIPLES AND PHILOSOPHY OF EDUCATION

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